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Attorney Docket. No.: P63712US0

39. The method of claim 38, wherein the circular nucleic acid is double stranded DNA.
40. The method of claim 38, wherein the mixture contains non circular nucleic acids and at least one other species of nucleic acids.
41. The method of claim 38, wherein the chaotropic substance is a chaotropic salt and/or the chaotropic substance is an alcohol.
42. The method of claim 38, wherein the silica material is a silica or glassfiber membrane, glass or silica in particulate form, beads or frits and/or silica-gel membranes comprising stacks of multi layer membranes.
43. The method of claim 38, wherein the silica material is magnetic attractable beads with a siliceous surface.
44. The method of claim 38, wherein the alkaline conditions are adjusted by adding an aqueous solution of an amphoteric substance.
45. The method of claim 38, performed in multi well plates.

Serial No.: 09/341,119

Attorney Docket. No.: P63712US0

46. The method of claim 38, performed using automatic pipetting machines.
47. The method of claim 38, wherein the following process steps are performed:
- cell lysis
  - adjustment of conditions for selective binding of plasmid DNA preventing binding of linear DNA to silica material
  - selective absorption of plasmid DNA to a silica surface
  - washing of the silica material
  - elution of the plasmid DNA from the silica material.
48. An aqueous buffer comprising 6 to 9 M sodium thiocyanate, 0 to 20 Vol.-% C<sub>1</sub> - C<sub>4</sub> alcohols and 25 to 130 mM buffer substance.
49. A kit comprising the aqueous buffer of claim 48 and auxiliary materials.
50. The method of claim 38, wherein the circular nucleic acid is a plasmid.
51. The method of claim 38, wherein the mixture contains non- circular nucleic acids and at least one other species of nucleic acids selected from the group consisting of RNA, single stranded

Serial No.: 09/341,119  
Attorney Docket. No.: P63712US0

DNA, double stranded linear DNA, circular open double stranded DNA, and combinations thereof.

52. The method of claim 38, wherein the chaotropic substance is a thiocyanate, urea, guanidinium salt, perchlorate salt, a halide salt and/or the chaotropic substance is methanol, ethano, n-propanol, isopropanol, n-butanol, n-pentanol, or combinations or said chaotropic substances.
53. The method of claim 38, wherein the silica material is a silica or glassfiber membrane, glass or silica in powder form, beads or frits and/or silica-gel membranes comprising stacks of several membrane layers (multi layer membranes).
54. The method of claim 38, wherein the silica material is magnetic attractable beads with a silica or glass-fiber surface.
55. The method of claim 38, wherein the alkaline conditions are adjusted by adding an aqueous solution of an amphoteric omega amino acid.

Serial No.: 09/341,119  
Attorney Docket. No.: P63712US0

56. The method of claim 38, wherein the alkaline conditions are adjusted by adding an aqueous solution of an amphoteric omega amino acid to effect a pH between 8 and 12 in the resulting mixture.
57. The method of claim 38, performed in multi well plates of 384 or 96 wells.
58. The aqueous buffer of claim 48, wherein the C<sub>1</sub> - C<sub>4</sub> alcohols are ethanol or isopropanol and the buffer substance is a ω-amino acid.
59. The kit of claim 49, wherein the auxiliary materials are columns with or without siliceous material, suspension of siliceous material, additional buffers, or instruction manual.
60. The kit of claim 59, wherein the additional buffers are resuspension buffers, lysis buffers, washing buffers, or elution buffers.
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